

AMENDMENT UNDER 37 C.F.R. § 1.111
Application No.: 09/913,611
Atty Docket No.: Q54917

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1 and 2. (canceled).

Claim 3. (currently amended): A gas diffusion porous carbon sheet for a solid polymer fuel cell which comprises a carbon fiber woven fabric obtained by firing in a non-oxidizing atmosphere a cellulose-based woven fabric in a temperature range of 900-3000°C, and having a thickness in the range of 0.05-0.4 mm, a volume resistivity of less than $0.2 \Omega \cdot \text{cm}$ in the layer direction, and a gas permeability of not less than $1500 \text{ cc/cm}^2/\text{hr/mmAq}$, and, wherein the electrical resistance in the direction of thickness of the woven fabric is no greater than $50 \text{ m}\Omega \cdot \text{cm}^2$ as measured between two copper plates with a load of 4 kgf/cm^2 .

Claim 4. (currently amended): The gas diffusion porous carbon sheet for a solid polymer fuel cell ~~carbon fiber woven fabric~~ as claimed in claim 3, wherein the carbon fiber woven fabric has an orientation which includes an orientation component having an orientation $(q/(p+q))$ of $4/9$ or greater.

Claim 5. (currently amended): The gas diffusion porous carbon sheet for a solid polymer fuel cell ~~carbon fiber woven fabric~~ as claimed in claim 3, wherein the carbon fiber woven fabric has an orientation which is an average orientation $(q/(p+q))$ of $1/3$ or greater.

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Claim 6. (currently amended): The gas diffusion porous carbon sheet for a solid polymer fuel cell ~~carbon fiber woven fabric~~ as claimed in claim 3, wherein the carbon fiber woven fabric ~~which~~ is a plain weave.

Claim 7. (currently amended): The gas diffusion porous carbon sheet for a solid polymer fuel cell ~~carbon fiber woven fabric~~ as claimed in claim 3, wherein the carbon fiber woven fabric ~~which~~ has a water repellent property having a water absorption height of less than 2 cm, and wherein a water repellant resin is coated in an amount of 5 to 60% by weight based on the carbon fiber fabric.

Claim 8. (canceled).

Claim 9. (withdrawn): The process for manufacture of a carbon fiber woven fabric, characterized by firing a cellulose-based woven fabric in a non-oxidizing atmosphere.

Claim 10. (withdrawn): The process for manufacture of a carbon fiber woven fabric as claimed in claim 9, wherein said cellulose-based woven fabric is soaked with a phosphoric acid or phosphorus compound solution.

Claim 11. (withdrawn): The process for the manufacture of a carbon fiber woven fabric as claimed in claim 9, wherein the firing temperature is in the range of 900-3000°C.

Claim 12. (withdrawn): The process for the manufacture of a carbon fiber woven fabric as claimed in claim 9, which includes coating the fired carbon fiber woven fabric with a water-repellent resin.

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Claim 13. (currently amended): The gas diffusion porous carbon sheet for a solid polymer fuel cell ~~carbon fiber woven fabric~~ as claimed in claim 3, wherein the compressive strength is not less than 70 kgf/cm².